

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

SINGULAR COMPUTING LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Civil Action No. 1:19-cv-12551 FDS

Hon. F. Dennis Saylor IV

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I. INTRODUCTION

The Court should grant Google LLC’s (“Google”)¹ following motions *in limine* for the reasons outlined therein. The following motions have been generally organized by subject matter.

II. MOTION *IN LIMINE* NO. 1: SINGULAR SHOULD BE PRECLUDED FROM OFFERING EVIDENCE OR ARGUMENT ABOUT GOOGLE’S PRE-2017 INTERACTIONS, COMMUNICATIONS, AND MEETINGS RELATED TO DR. BATES OR WITH DR. BATES, INCLUDING ANY EXECUTED OR CONTEMPLATED AGREEMENTS BETWEEN DR. BATES AND GOOGLE.

At trial, Singular will argue (1) that Google willfully infringed two patent claims—the earliest of which issued on March 26, 2013, and (2) that certain objective indicia support non-obviousness. In a misguided attempt to carry its burden on these points, Singular plans to introduce irrelevant and unfairly prejudicial evidence detailing pre-2017² interactions between Dr. Bates and Google employees and related communications. That evidence should be excluded.

A. LEGAL STANDARDS

1. Willfulness

Singular bears the burden of proving its claim that Google willfully infringed the asserted patents. “Knowledge of the asserted patent and evidence of infringement [are] necessary, but not sufficient, for a finding of willfulness.” *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 988 (Fed. Cir. 2021). Singular must prove more: it must show that Google “had a specific intent to infringe at the time of the challenged conduct.” *Id.* at 987. That requires knowledge of the asserted patents, knowledge that Google’s conduct constitutes infringement, and an intent to infringe.

¹ All references to Google include Google LLC, Alphabet Inc., and X, as well as all employees thereof. Similarly, all references to Dr. Bates include Singular Computing LLC (“Singular”). All exhibit citations herein are to exhibits attached to the Declaration of Eric Phung in Support of Defendant Google LLC’s Motions *In Limine* (“Phung Decl.”).

² In 2017, Google became aware of Singular’s patents. Because evidence after that point presents unique issues, it is not addressed in this motion.

2. Obviousness

A claimed invention is unpatentable “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious” to a skilled artisan. 35 U.S.C. § 103. “Obviousness is a legal question based on underlying factual determinations.” *Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1343 (Fed. Cir. 2017). These factual determinations include “any objective indicia of non-obviousness.” *Id.* The objective indicia include, for example, evidence of copying or a long-felt need for an invention. *E.g.*, 3 Annotated Patent Digest (Matthews) § 18:91.

B. ARGUMENT

1. Communications Before the Asserted Patents Issued Are Not Relevant to Any Fact of Consequence

Singular plans to introduce a host of evidence reflecting or relating to communications between Google and Dr. Bates that predate the issuance of *any* asserted claim (the “pre-issuance communications”). This evidence largely centers on discussions between Dr. Bates and Google engineers beginning in late 2010, *see* Phung Decl., Ex. 1, and that fizzled out by 2012, *see id.*, Ex. 2. During these discussions, Dr. Bates pitched Google on the benefits of [REDACTED] [REDACTED]” in computers. *Id.*, Ex. 3; *see also, e.g., id.*, Exs. 4 at -392 (discussing [REDACTED] [REDACTED]); 3 at -457 (describing [REDACTED] [REDACTED]); 5 at -532 (describing [REDACTED] [REDACTED]). A few Google engineers expressed interest in Dr. Bates’s ideas, *id.*, Exs. 6; 7, but from the very beginning, there were “[REDACTED] [REDACTED] *Id.*, Ex. 8 at -454; *see also id.*, Exs. 9 at -650 (describing the proposal as [REDACTED] [REDACTED]); 10 at -422 (describing [REDACTED] [REDACTED]). Eventually, this series of communications between Dr. Bates and Google ended by 2012—before either of the asserted patents issued.

These communications are irrelevant to Singular’s patent-infringement allegations and should be excluded on that basis. *See* Fed R. Evid. 401, 402. Obviously, communications that predate Singular’s patent rights cannot be relevant to infringement. *See Gustafson, Inc. v.*

Intersystems Indus. Prods., Inc., 897 F.2d 508, 510 (Fed. Cir. 1990) (“It is obvious that a party cannot be held liable for infringement ... of a nonexistent patent.”) (internal quotation marks and emphasis omitted). Nor are those communications relevant to damages.³ Instead, it appears that Singular plans to offer the pre-issuance communications to support its willfulness and validity cases.

a. The Pre-Issuance Communications Cannot Support Willfulness

Before a patent issues, a defendant obviously cannot have knowledge of the patent, much less knowledge that particular actions will infringe it. For that reason, communications like these that predate any asserted patent are relevant to willfulness only if they constitute “particularly egregious behavior.” *Sonos, Inc. v. D&M Holdings Inc.*, No. 14-1330-WCB, 2017 WL 5633204, at *4 (D. Del. Nov. 21, 2017). Courts have admitted pre-issuance evidence of willfulness *only* when it shows the defendant copied the plaintiff’s invention. *Id.* at *3-4 (collecting cases, which uniformly involve copying). And “copying requires evidence of efforts to replicate a specific product.” *ZUP, LLC v. Nash Mfg., Inc.*, 896 F.3d 1365, 1375 (Fed. Cir. 2018) (addressing objective indicia of nonobviousness).

None of the pre-issuance communications here comes remotely close to evidencing copying or “particularly egregious behavior.” At best, the communications show that Google engineers gave mixed reviews to Dr. Bates’s abstract idea—approximate computing—which itself was not novel. Phung Decl., Ex. 5 at -532 (Google engineer: [REDACTED]). No pre-issuance communication suggests or shows that Google copied the only alleged invention relevant to the parties’ dispute: a device with at least 100 more LPHDR execution units than 32-bit execution units and that complies

³ The nature of the parties’ commercial relationship, *see* Phung Decl., Ex. 18 at 91 (Green Rpt.) (citing pre-issuance communications), is not a fact of consequence because it is (1) not disputed and (2) has no impact on either party’s damages theory. *Cf.* 1 McCormick On Evid. § 185 (8th ed.) (“To the extent that the evidence is offered to help prove a proposition that is not a matter in issue, it is immaterial.”). Even if it were minimally relevant, that relevance would be outweighed by a risk of unfair prejudice. The jury would be invited to rely on the evidence for willfulness, which would be inappropriate as explained in this motion.

with specific error and range limitations. *See, e.g.*, Dkt. 552 at 8:10-9:9 (concluding the asserted claims are directed to “computer architecture,” specifically “a number of LPHDR execution units”); Dkt. 354 at 25 (construing “execution unit” as a “tangible” component). Thus, all of the evidence reflecting or regarding communications between Bates and Google before issuance of the asserted patents (i.e., March 26, 2013) is irrelevant and must be excluded. *See* Fed. R. Evid. 401.

b. The Pre-Issuance Evidence Cannot Support Objective Indicia of Non-Obviousness

For similar reasons, the pre-issuance communications are not relevant to any objective indicia of nonobviousness. *See* Matthews § 18:91 (collecting various indicia). As explained above, the pre-issuance communications cannot be evidence of copying. Nor can those communications be evidence of a long-felt need, unexpected results, or skepticism. This is because Dr. Bates’s communications with Google focused on the *idea* of approximate computing—not the much narrower alleged invention (i.e., a tangible device) asserted here. He cannot, therefore, show a nexus between this evidence and his claimed invention.

c. In All Events, Admission of the Pre-Issuance Evidence Would Be Unfairly Prejudicial

Even if the pre-issuance communications were relevant, any minimal probative value would be substantially outweighed by a risk of confusing the issues and unfair prejudice. *See* Fed. R. Evid. 403. Singular does not, and cannot, claim that Dr. Bates invented approximate computing or LPHDR execution units. *See* Phung Decl., Ex. 21 (*Google LLC v. Singular Computing LLC*, No. IPR2021-00179, Paper 62 at 49 (P.T.A.B. May 11, 2022) (*Final Written Decision*) (“But low-precision arithmetic—including LPHDR multiplication—was not novel.” (cleaned up))). Yet the pre-issuance communications focus on the abstract idea of approximate computing. *E.g.*, Phung Decl., Exs. 2–5. If Singular is able to introduce pre-issuance communications and argue that they support willfulness, it would invite the jury to draw the improper inference that Google willfully infringed because it (purportedly) copied the idea of using *approximate computing* from Dr. Bates. Google did no such thing—but even if it had, that

would be irrelevant to whether Google willfully infringed the specific invention actually at issue. This is a quintessential example of “unfair prejudice” that justifies exclusion. *See* Fed. R. Evid. 403 advisory committee’s note to 1972 Proposed Rules (defining unfair prejudice as “an undue tendency to suggest decision on an improper basis”).

2. Communications After an Asserted Patent Issued, But Before 2017 Are Not Relevant to Any Fact of Consequence

Separately, Singular plans to introduce evidence reflecting or relating to communications between Google and Dr. Bates after the issuance of at least one asserted patent, but before 2017 (the “post-issuance communications”).⁴ In late 2013, Dr. Bates reconnected with Google employees, re-pitching his idea of using [REDACTED] arithmetic in computers. Phung Decl., Exs. 11 at -973 (shared among Google employees in late 2013, *see id.*, Exs. 12; 13 at -804 (remarking that [REDACTED])). Like before, Dr. Bates’s proposal was met with mixed reviews within Google. While some engineers were interested in the idea, *see id.*, Ex. 13 at -804 (expressing [REDACTED] [REDACTED]), Google ultimately rejected Dr. Bates’s proposal in early 2014. *Id.*, Ex. 14. Google even explained its reasons for doing so: Dr. Bates’s research idea remained [REDACTED] with respect to its relevance to [REDACTED] Google was developing. *Id.*, Ex. 14 at -398. Indeed, Bates had merely presented vague ideas without any firm technology to back them up. *See id.*, Exs. 15; 16.

This evidence cannot be relevant to willfulness or objective indicia of nonobviousness. It is well-established law that communications which fail to “specifically identify” the asserted patents cannot support a claim of willfulness. *E.g.*, *Sonos, Inc. v. Google LLC*, 591 F. Supp. 3d 638, 646–47 (N.D. Cal. 2022); *Sprint Commc’ns Co. L.P. v. Cequel Commc’ns, LLC*, No. 18-1752-RGA, 2022 WL 421336, at *1 (D. Del. Jan. 13, 2022). No pre-2017 communication identified any specific patent, and Dr. Bates did not provide any contrary testimony. *See* Phung Decl., Ex. 17 at 132:24-25 (Bates 7/20/21 Tr.) [REDACTED]

⁴ Communications starting in 2017 involve unique issues, so they are not addressed here.

██████████). Moreover, the communication cannot be relevant to objective indicia of nonobviousness because Singular cannot show a nexus between these communications, which are about the idea of approximate computing, and the claimed invention, which is about a specific hardware structure and specific error limitations. *Cf. Final Written Decision* at 46-52 (holding Singular did not show a nexus for its arguments about the objective indicia).

Even if this evidence were relevant, any minimal probative value of these post-issuance communications would be substantially outweighed by a risk of unfair prejudice. *First*, admitting this evidence would invite the jury to make an improper inference regarding Google’s “knowledge of the asserted patents.” *See Bayer*, 989 F.3d at 988 (requiring such knowledge to prove willful infringement). At best, the post-issuance communications show that Singular informed Google that it owned or was pursuing some “patents” generally. And even if this were minimally relevant to show knowledge of “the asserted patents,” well-established law prevents the jury from finding willfulness based on these communications alone. *E.g., Sonos, Inc.*, 591 F. Supp. 3d at 646–47 (N.D. Cal. 2022) (holding that several letters that failed to “specifically identify” the asserted patents were insufficient to support a willfulness claim). The danger that the jury will err in this way on the basis of those communications is so substantial that the evidence should be excluded altogether.

Second, admitting this evidence would invite the jury to make an impermissible inference about Google’s “specific intent” to infringe. *See Bayer*, 989 F.3d at 987 (requiring “specific intent” as an element of willful infringement). Certainly, the post-issuance communications might be read to suggest that Google was considering ideas ██████████ to *approximate computing*. Phung Decl., Ex. 12 at -356. But even if this were minimally relevant to show Google’s intent, it would also invite an impermissible inference—that Google willfully infringed based on statements about *approximate computing*. But that would be irrelevant to whether Google willfully infringed the asserted claims, which have been interpreted by this Court to be directed to specific hardware with specific error requirements.

Third, admitting the evidence would invite the jury to make an impermissible inference about the objective indicia of nonobviousness. Again, the communications between Google and Dr. Bates relate—almost exclusively—to discussions about *approximate computing*. But that is not the alleged invention here. Instead, the purported invention is much narrower, and if this evidence is admitted, it would invite the jury to confuse these issues and draw improper inferences.

These significant risks of unfair prejudice to Google substantially outweigh any minimal, indirect probative value the post-issuance communications might have. Thus, under Rule 403, that evidence ought to be excluded.

III. MOTION *IN LIMINE* NO. 2: SINGULAR SHOULD BE PRECLUDED FROM OFFERING EVIDENCE, ARGUMENT, OR TESTIMONY THAT CHARACTERIZES GOOGLE’S ACTIONS AS COPYING OR MISAPPROPRIATION.

Google moves, under Federal Rules of Evidence 402 and 403, to exclude argument or testimony that characterizes Google’s actions as “stealing,” “theft,” “copying,” “misappropriating,” “pirating,” “trespassing,” or any similar terms.

A. Claims of misappropriation and copying are not relevant to a patent infringement action.

This is a patent infringement lawsuit, not a trade secret misappropriation lawsuit. Singular has never alleged or argued that Google misappropriated any trade secrets, stole any confidential information, or violated any non-disclosure agreement. The only claims it has alleged in this action are patent infringement claims. Thus, any attempt to characterize Google’s conduct as “theft” or “misappropriation” is improper.

To state the obvious, patent infringement is not theft. *Rmail Ltd. v. Amazon.com, Inc.*, No. 2:10-CV-00258-JRG, 2019 WL 13215406, at *4 (E.D. Tex. June 21, 2019) (granting motion *in limine* to preclude “analogizing patent infringement to theft”). Indeed, it is settled that “evidence of copying is of no import on the question of whether the claims of an issued patent are infringed, either literally or by equivalents.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1336 (Fed. Cir. 2009) (internal quotation marks and citations omitted); *see*

also *AK Steel Corp. v. Sollac & Ugine*, 234 F. Supp. 2d 711, 763–64 (S.D. Ohio 2002) (“This motion relates to patent infringement, not to allegations of trade secret misappropriation. Thus, the alleged copying is irrelevant.”), *aff’d*, 344 F.3d 1234 (Fed. Cir. 2003). Infringement is, instead, “determined by comparing the accused devices . . . with the claims of the patent as properly construed.” *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1351 (Fed. Cir. 2002). Consequently, whether Google infringes the asserted patents in this case will depend on whether the TPUs satisfy the limitations in the asserted claims, and (unfounded) allegations or claims that Google copied, misappropriated, or stole any of Dr. Bates’s ideas have no relevance here.

Allegations and claims of copying, misappropriation, or theft are also irrelevant in a patent infringement lawsuit alleging willful infringement. Evidence of willful infringement centers on “the knowledge of the actor at the time of the challenged conduct,” including their “[k]nowledge of *the patent* alleged to be willfully infringed,” and knowledge that their conduct “constitute[s] infringement.” *SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 608 (D. Mass. 2018) (Saylor, J.) (emphasis added). Stated differently, whether infringement was willful turns on what the accused infringer *knew*, not what they *did*. *Smith & Nephew, Inc. v. Interlace Med., Inc.*, No. CIV.A. 10-10951-RWZ, 2012 WL 3560811, at *2 (D. Mass. Aug. 17, 2012) (finding that “[p]laintiff’s proposed evidence [wa]s too broad or not relevant to wilfulness” because “[g]eneral unethical conduct is not wilfulness”). It is improper for a plaintiff to focus their willfulness arguments on whether an accused infringer actively copied or misappropriated a patent holder’s ideas—as opposed to the patented invention—as that threatens to “improperly equate copying of [] trade secrets with infringement of [] patents” and “the law does not support [the] blurring of th[ose] two concepts.” *B.E. Meyers & Co. v. United States*, 47 Fed. Cl. 375, 380 (2000). Thus, (unfounded) allegations or claims that Google copied, misappropriated or stole Singular’s technology are improper—any willfulness argument should be focused solely on whether Google was aware of the asserted patents and knew that its design of the TPU infringed those patents.

Tellingly, much of the evidence that Singular might (wrongfully) characterize as showing that Google copied, stole or misappropriated Dr. Bates’s technology has little, if anything, to do with Singular’s claims of patent infringement. For example, Singular often raises the fact that Dr. Bates and Google had numerous communications over several years, *see, e.g.*, Phung Decl., Exs. 4; 2, but none of these communications addressed the specific asserted patents at issue here and almost none discussed the TPUs that allegedly infringe the asserted patents. Indeed, at least some of these communications occurred before the asserted patents issued and many concern other Google technology (like [REDACTED]) that Singular has never accused of infringement. *See* Phung Decl., Exs. 2; 19; 20. There also isn’t any evidence showing that any Google engineer who worked on the accused TPU chips ever saw either of the asserted patents. So, although Google believes that such evidence should be excluded as irrelevant (*see* Google’s Motion *In Limine* No. 1 above), even if that evidence is admitted, Singular should not be allowed to characterize that evidence as showing that Google copied, stole or misappropriated Bates’s ideas.

Nor are Singular’s allegations relevant to any secondary considerations of nonobviousness. Though copying is a factor relevant to obviousness, it is a narrow consideration that “requires the replication of a *specific product*.” *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (emphasis added). Typically, copying is shown through “internal documents” or “direct evidence such as disassembling a patented prototype, photographing its features, [] using the photograph as a blueprint to build a virtually identical replica; or access to, and substantial similarity to, the patented product (as opposed to the patent).” *Id.* (emphasis added, citations omitted). There is no such evidence here. For example, Singular can identify no evidence that Google copied any Singular product. Instead, Singular asserts that Google copied ideas in presentations Dr. Bates provided to Google, but those presentations principally described broad ideas about approximate computing or LPHDR execution units—concepts that the Patent Office found, and Singular no longer disputes, Dr. Bates did not invent. *See* Phung Decl., Ex. 21 (*Google LLC v. Singular Computing LLC*, No.

IPR2021-00179, Paper 62 at 49 (P.T.A.B. May 11, 2022) (*Final Written Decision*)) (“But low-precision arithmetic—including LPHDR multiplication—was not novel.”) (cleaned up).

Moreover, the Patent Office already considered Singular’s claim that “after Dr. Bates made his presentations to [Google] in 2010–2014, [Google] copied Dr. Bates’s invention in its Tensor Processing Unit (TPU) v2 and v3 products released in 2017–2018”—a claim that relied on all the same purported “copying” evidence that Singular will presumably offer here—and found that Singular’s evidence was “not . . . probative of nonobviousness.” *Id.* at 45-46. Singular is not appealing that finding in any of the IPRs.

At best, Singular may be able to establish that Google knew about the patents-in-suit and Singular’s products. But, as the Federal Circuit has held, evidence establishing an accused infringer’s mere knowledge of patents and the patent holder’s products “does not approach the evidence that [the Federal Circuit] ha[s] held sufficient to establish copying.” *Enova Tech. Corp. v. Seagate Tech. (US) Holdings Inc.*, 706 F. App’x 987, 995 (Fed. Cir. 2017).

B. Characterizing Google’s conduct as theft or misappropriation is highly prejudicial.

Singular should not be allowed to present attorney argument or witness testimony that characterizes Google’s conduct as copying, misappropriating, or stealing Dr. Bates’s ideas because those characterizations would be highly prejudicial to Google and likely to confuse the jury. As numerous courts have recognized, “the burden imposed on a jury in a patent trial is extraordinary. . . . [J]uries are tasked with resolving complex technical issues regarding infringement and invalidity, many times with respect to multiple patents and/or multiple prior art references.” *Dutch Branch of Streamserv Dev. AB v. Exstream Software, LLC*, No. 08-343-SLR, 2009 WL 2705932 at *1 (D. Del. 2009). Unsurprisingly, “patent trials pose significant risks of jury confusion due to the complex technical issues involved.” *Trimed, Inc. v. Stryker Corp.*, No. CV-06-1918-SVW (SHx), 2010 WL 11462840, at *5 (C.D. Cal. Sept. 1, 2010). That risk of confusion is only amplified by the technology at issue in this case, which involves “intricate and

complicated issues of computer science and machine learning.” *Personalized User Model LLP v. Google Inc.*, No. 09-525-LPS, 2012 WL 295048, at *5 (D. Del. Jan. 25, 2012).

Permitting those characterizations would encourage (or allow) jurors to swap the relevant, difficult and technical inquiry (whether a computer chip satisfies the limitations of the asserted claims) for a simpler, and irrelevant, moral one (whether Google copied someone else’s work), thereby chancing that they will ignore the critical question of whether Google’s TPUs actually infringe. This cannot be allowed.

The risk of substituting a complex technical inquiry for a simple moral one in this manner is very high. For that reason, courts have found “evidence of copying [is] highly prejudicial” to an accused infringer. *Asyst Techs., Inc. v. Empak, Inc.*, No. C 98-20451 JF, 2007 WL 120845, at *2 (N.D. Cal. Jan. 11, 2007). For example, courts have noted instances of juries being “‘obviously swayed’ by counsel’s argument that [defendant] had stolen [the patented] invention,” which required correction. *Go Med. Indus. Pty., Ltd. v. Inmed Corp.*, 471 F.3d 1264, 1270 (Fed. Cir. 2006) (describing trial court decision and affirming).

It is therefore unsurprising that courts have granted motions in limine to exclude argument and testimony that characterizes an accused infringer’s actions as “stealing,” “copying,” “misappropriating,” or any other similar terms. *See, e.g. Touchstone Technologies, Inc. v. Google LLC*, Case No. 6:21-cv-00569-ADA, Dkt. 222 at 2 (W.D. Tex. Jun. 21, 2023) (“The parties shall . . . be precluded from introducing evidence, testimony, or argument that characterizes any other person or entity’s actions as ‘stealing,’ ‘copying,’ ‘misappropriating,’ ‘pirating,’ ‘trespassing,’ or any similar terms.”); *Medtronic Vascular, Inc. v. Advanced Cardiovascular Sys., Inc.*, No. Civ.98-80-SLR, 2005 WL 67086, at *1 (D. Del. Jan. 5, 2005) (granting “motion *in limine* to preclude [plaintiff] from introducing argument or evidence relating to its claim that [defendant] misappropriated trade secrets”); *Rmail Ltd.*, 2019 WL 13215406, at *4. This Court should do the same.

IV. MOTION *IN LIMINE* NO. 3: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING TESTIMONY REGARDING WHETHER GOOGLE WILLFULLY OR INTENTIONALLY INFRINGED, INCLUDING EXPERT TESTIMONY ON

THE SUBJECTIVE STATE OF MIND (E.G., KNOWLEDGE OR INTENT) OF GOOGLE OR ITS EMPLOYEES.

“A party’s intent or state of mind is not the proper subject of expert testimony.”

OneBeacon Am. Ins. Co. v. Commercial Union Assurance Co. of Can., 804 F. Supp. 2d 77, 85 (D. Mass. 2011), *aff’d*, 684 F.3d 237 (1st Cir. 2012); *see also Holmes Grp., Inc. v. RPS Prods., Inc.*, No. 03-40146-FDS, 2010 WL 7867756, at *5 (D. Mass. June 25, 2010) (“An expert witness may not testify as to another person’s intent.”). Thus, courts routinely exclude expert testimony seeking to opine as to a party’s intent or state of mind. *See, e.g., In re Intuniv Antitrust Litig.*, No. 1:16-cv-12653, 2020 WL 5995326, at *23 (D. Mass. Oct. 9, 2020) (excluding expert opinions “concerning the intentions and mental states” of the parties); *Hunt v. Northwestern Mutual Life Ins. Co.*, No. 09-11737-RWZ, 2012 WL 13051116, at *2 (D. Mass. Feb. 24, 2012) (granting motion *in limine* to exclude expert testimony regarding party’s state of mind); *Holmes Grp.*, 2010 WL 7867756, at *5 (precluding expert testimony seeking to “testify as to the subjective state of mind of [a corporate party] or its representatives”); *Eolas Techs., Inc. v. Microsoft Corp.*, 270 F. Supp. 2d 997, 1008-09 (N.D. Ill. 2003) (granting motion *in limine* to exclude expert testimony regarding “intent to deceive” in the context of willful infringement). Accordingly, Singular’s experts should be precluded from offering any opinions as to Google’s intent or state of mind, including whether Google willfully infringed Singular’s patents.

For example, Singular’s technical expert, Dr. Sunil Khatri, should not be permitted to testify as to Google’s intent and whether it willfully infringed Singular’s patents. Dr. Khatri’s opening expert report at paragraphs 111-124, which offers opinions as to the [REDACTED] [REDACTED] to allegedly infringe Singular’s patents, suggests that he might offer such testimony. *See, e.g., Phung Decl., Ex. 22 (Khatri Rpt.) ¶¶ 111-124.* Indeed, Dr. Khatri’s report goes so far as to state:

[REDACTED]



Id. ¶ 123.⁵ That paragraph constitutes an express opinion as to Google’s state of mind and an implicit opinion as to Google’s intent to willfully infringe Singular’s patents. Such opinion testimony is wholly improper and inadmissible as an expert opinion. *See Holmes Grp.*, 2010 WL 7867756, at *5-6; *see also Eolas Techs.*, 270 F. Supp. 2d at 1008-09; *Trading Technologies, Int’l, Inc. v. IBG LLC*, No. 10 C 715, 2020 WL 12333010, *2 (N.D. Ill. Oct. 21, 2020) (excluding willful infringement opinion testimony, including expert’s view on the factual record, because “it is not helpful to jurors for an expert to tell them what he thinks about an [accused infringer’s] intent”); *X-Tra Light MFG Inc. v. Acuity Brands, Inc.*, No. H-04-1413, 2007 WL 7117888, at *1 (S.D. Tex. Feb. 13, 2007) (same); *Pioneer Hi-Bred Int’l, Inc. v. Ottawa Plant Food, Inc.*, 219 F.R.D. 135, 142-43 (N.D. Iowa 2003) (same).

As another example, Singular’s damages expert, Philip Green, should not be permitted to testify as to Google’s state of mind in opining as to the nature of the parties’ relationship. Mr. Green’s report opines as to the purported significance of Singular’s technology to Google’s business and states that “[REDACTED]” *See Phung Decl., Ex. 18 (Green Rpt.)* at 92, 108 (emphasis added).⁶ Again, such an expert opinion purporting to characterize Google’s state of mind is wholly improper. *See, e.g., OneBeacon*, 804 F. Supp. 2d at 85; *Holmes Grp.*, 2010 WL 7867756, at *5.

To the extent that Singular attempts to elicit such improper testimony from Dr. Khatri, Mr. Green, or any of its experts, it should be precluded from doing so.

⁵ Dr. Khatri’s report at paragraphs 111-124 is also subject to Google’s pending Motion to Exclude Certain Expert Testimony of Sunil Khatri, Ph.D. *See* Dkt. 480 at 18-19.

⁶ Mr. Green’s report is also subject to Google’s pending Motion to Exclude Certain Opinion Testimony of Philip Green. *See* Dkt. 477.

V. MOTION *IN LIMINE* NO. 4: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING EVIDENCE OR ARGUMENT REGARDING COMMUNICATIONS BETWEEN GOOGLE EMPLOYEES AND ATTORNEYS.

The attorney-client privilege and the work-product doctrine—which safeguard attorney-client confidences and encourage candid exchange between attorney and client—have meaning only if a party is not punished for invoking their protection. Thus, it is well-settled that a jury should not be permitted to draw an adverse inference from a party’s assertion of the attorney-client privilege or work-product doctrine. Applying this established rule, courts routinely grant motions *in limine* to (1) exclude reference to a party’s invocation of either the privilege or doctrine and (2) exclude questioning likely to elicit a privilege objection, recognizing that the only purpose of bringing these facts to light would be to encourage the jury to infer that the withheld information is somehow harmful. *See, e.g., Tallo v. United States*, 344 F.2d 467, 469 (1st Cir. 1965) (collecting authorities holding that “it is improper to require a defendant to claim other privileges,” including the attorney-client privilege, “in the presence of a jury”); *see also Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1344 (Fed. Cir. 2004) (“[N]o adverse inference shall arise from invocation of the attorney-client and/or work product privilege.”). Courts exclude such evidence under Fed. R. Evid. 403 because “its probative value is substantially outweighed by a danger of one or more of . . . unfair prejudice, confusing the issues, misleading the jury, undue delay, [and] . . . wasting time”

The same rationales for exclusion apply here. Google therefore asks the Court to preclude Singular from referencing or calling attention to Google’s invocation of the privilege or asking questions likely to result in a privilege objection.

A. BACKGROUND

Throughout discovery and in multiple depositions, Singular’s counsel repeatedly asked questions clearly calling for privileged information, forcing Google’s counsel to object numerous times. Singular has now designated such deposition testimony to play in front of the jury at trial. For example, Singular deposed former counsel for Google X, Catherine Tornabene, and asked the following questions:

[REDACTED]

Phung Decl. Ex. 23 at 11:15-18:8; *see also id.* at 34:2-35:9 (series of questions regarding privileged conversations), 37:7-40:19 (same), 48:13-50:7 (same), 53:10-54:13 (same). Singular has designated the above deposition testimony for use at trial.

Singular's repeated questions calling for privileged information were not just directed to former counsel. For example, Singular's counsel asked Google employee Jeff Dean the following questions:

[REDACTED]

Phung Decl. Ex. 24 at 206:17-207:10; *see also id.* at 210:17-212:3. Singular has also designated most of the testimony above to play in front of the jury at trial.

These examples are by no means exhaustive with regard to each witness or with regard to multiple other depositions of Google witness. *See, e.g.,* Phung Decl. Ex. 25 at 70:3-71:8, 87:12-90:9, 94:5-95:23, 96:18-97:21 (series of questions all attempting to elicit information about privileged communications). Such references to Google's invocation of privilege or similar questions designed to elicit a privilege objection have no place at trial.

B. ARGUMENT

1. Under well-established law, the jury is not permitted to draw an adverse inference from Google's assertions of privilege.

Singular should not be permitted to introduce evidence or argue to the jury about Google's invocation of privilege or the fact that any privileged communications occurred. The only purpose of putting these facts before the jury would be to encourage the jury to make adverse inferences against Google based on such information; these adverse inferences include unsupported assumptions that Google is withholding information helpful to Singular's case or that someone at Google must have done something wrong because they consulted counsel—precisely what courts have time and again forbidden under Rule 403. *See, e.g., Beraha v. Baxter Healthcare Corp.*, No. 88C 9898, 1994 WL 494654, at *3 (N.D. Ill. Sept. 6, 1994) (“[T]he only purpose for which [plaintiff] seeks to admit evidence of the fact that these communications occurred is to enable the jury to draw an adverse inference therefrom. This is exactly what is prohibited.”).

The attorney-client privilege exists “to encourage full and frank communication between attorneys and their clients and thereby promote broader public interest[] in [] observance of law and administration of justice.” *Upjohn Co. v. United States*, 449 U.S. 383, 389 (1981). That purpose can only be fulfilled if a party is not punished for invoking the privilege. For that reason, parties may not seek, and juries may not draw, adverse inferences from the invocation of the attorney-client privilege or work-product doctrine. *See, e.g., Tallo*, 344 F.2d at 469 (collecting authorities); *Astra Pharm. Prod., Inc. v. Beckman Instruments, Inc.*, No. CA-79-1445, 1983 WL 51933, at *4 (D. Mass. Mar. 24, 1983), *aff'd*, 718 F.2d 1201 (1st Cir. 1983) (holding that the court should not permit drawing of adverse inferences from the proper assertion of the attorney-client privilege).⁷

⁷ Other circuits are in accord. “[N]o adverse inference shall arise from invocation of the attorney-client and/or work product privilege.” *See Knorr-Bremse*, 383 F.3d at 1344; *see also In re Tudor Assocs., Ltd.*, II, 20 F.3d 115, 120 (4th Cir. 1994) (“A negative inference should not be drawn from the proper invocation of the attorney-client privilege.”); *Freedom Card, Inc. v. JPMorgan Chase & Co.*, 432 F.3d 463, 479–80 n.25 (3d Cir. 2005) (holding that “it is improper to draw an inference of bad faith from the assertion of the attorney-client privilege”).

These same reasons counsel in favor of excluding evidence of Google's assertions of privilege. By designating deposition testimony where Google's witnesses invoke the attorney-client privilege, Singular is clearly trying to create negative inferences against Google. The same would occur if Singular were to make arguments about, or ask witnesses about, Google's assertions of privilege. But Singular should not be permitted to introduce evidence or argument designed to show or elicit Google's invocation of the attorney-client privilege or work-product doctrine at trial. Singular has yet to identify a legitimate basis for seeking to introduce such evidence, including during the meet-and-confer process for motions *in limine*. Even if it had, any minimal relevance such facts could have would be far outweighed by the prejudicial effect of permitting such questioning. In deciding to assert the privilege, Google relied on well-established law holding that no adverse inference would be drawn from doing so.

In ruling on motions *in limine*, courts have prohibited plaintiffs from introducing similar evidence in similar circumstances and for similar reasons. For example, in *McKesson Information Solutions, Inc. v. Bridge Medical, Inc.*, the court ordered that the plaintiff was "precluded, in all respects, from introducing evidence or testimony pertaining to [defendant's] assertion of the attorney-client privilege over the opinion of counsel it received." 434 F. Supp. 2d 810, 812 (E.D. Cal. 2006); *see also Beraha*, 1994 WL 494654, at *3; *Goldberg v. 401 N. Wabash Venture LLC*, No. 09 C 6455, 2013 WL 1816162, at *7 (N.D. Ill. Apr. 29, 2013). Google is unaware of any case under federal law that permits a party to argue that the jury can draw an adverse inference from an opponent's invocation of privilege or introduce evidence regarding such invocations.

Here, it would be highly prejudicial to Google if it were forced to repeatedly invoke the attorney-client privilege or work product doctrine. Singular should not be permitted to dangle Google's invocation of the "privilege" in front of the jury in the hopes that the jury will conclude that Google is "hiding" information. *See McKesson*, 434 F. Supp. 2d at 812 (explaining the prohibition on encouraging juries to draw a "negative inference" and "speculate why [a party] would not reveal its counsel's opinion"). Google has the right to a fair trial without the harmful

and prejudicial consequence of an adverse inference being drawn based on an assertion of privilege.⁸ *See* Fed. R. Evid. 403. Accordingly, this motion should be granted in its entirety.

2. The Court should prohibit Singular from asking questions of witnesses that will require the witness to invoke attorney-client privilege in front of the jury.

Singular also should not be permitted to ask questions of Google witnesses likely to elicit a privilege objection. Allowing as much would give Singular a backdoor to putting Google’s invocation of the privilege before the jury in hopes that it draws an adverse inference. Courts, including courts in the First Circuit, have long prohibited this practice. *See, e.g., Tallo*, 344 F.2d at 469–70; *see also United States v. Tomaiolo*, 249 F.2d 683, 690 (2d Cir. 1957).

Thus, for the same reasons discussed above, courts regularly prohibit plaintiffs from “ask[ing] any question of a defense witness where it would be reasonable to conclude that the question will elicit an invocation of the attorney-client privilege.” *King Drug Co. of Florence, Inc. v. Cephalon, Inc.*, No. 2:06-cv-1797, 2016 WL 278054, at *2 (E.D. Penn Jan. 22, 2016). Courts often do so by granting motions *in limine* seeking to exclude such questioning. *See, e.g., In re Lidoderm Antitrust Litig.*, No. 14-md-02521-WHO, 2018 WL 7814761, at *4 (N.D. Cal. Feb. 7, 2018) (instructing “plaintiffs not to elicit privilege objections for the sole purpose of invoking a privilege objection” in front of the jury); *see also Sharer v. Tandberg, Inc.*, No. 1:06-cv626 (JCC), 2007 WL 983849, at *2 (E.D. Va. Mar. 27, 2007) (granting motion *in limine* “because the fact of legal consultation is only relevant in order to draw this improper inference, the danger of unfair prejudice to the Plaintiff greatly outweighs any probative value under Rule 403”). As these courts have recognized, it would be “inappropriate” to force a party “to either invoke the privilege in the jury’s presence (creating the negative inference desired by plaintiffs) or waive the privilege by responding to the question.” *Williams v. Sprint/United Mgmt. Co.*, 464 F. Supp. 2d 1100, 1108 (D. Kan. 2006).

⁸ A limiting instruction cautioning the jury against drawing an adverse inference would not cure the substantial risk of unfair prejudice, as the jury would still be left to speculate about why a particular witness sought the advice of counsel, which may still result in a negative inference prohibited by a litany of caselaw.

As discussed above, any minimal relevance of such testimony is far outweighed by the prejudicial effect of an impermissible adverse inference by the jury. Thus, Google respectfully requests that the Court exclude all testimony, evidence, or argument about Google's invocation of privilege and preclude Singular from asking questions likely to result in privilege objections.

VI. MOTION *IN LIMINE* NO. 5: SINGULAR SHOULD BE PRECLUDED FROM OFFERING EVIDENCE OR ARGUMENT ABOUT (I) GOOGLE'S REVENUE GENERATED FROM USE OF THE ALLEGEDLY INFRINGING TPUS AND (II) GOOGLE'S SERVICES OR PRODUCTS THAT USE THE ALLEGEDLY INFRINGING TPUS.

The court should preclude Singular from offering evidence or argument about (1) the amount of revenue that Google has generated from use of products and services that make use of the accused TPUs, including Google's total advertising revenues, and (2) Google's services or products that make use of the allegedly infringing TPUs. Because Singular's damages expert does not offer a damages opinion based on either of those two categories, both matters are irrelevant to the issues of infringement and damages and pose a high risk of unfairly prejudicing Google, confusing the jury, and wasting time. *See* Fed. R. Evid. 401; Fed. R. Evid. 403.

A. The amount of revenue that Google has generated from its products and services that use the accused TPUs is irrelevant and unfairly prejudicial.

Singular should be precluded from introducing evidence or argument about Google's revenue generated from its products or services that make use of its TPUs, including Google's advertising revenue, because these revenues are irrelevant to Mr. Green's damages conclusion. Although Mr. Green does not proffer a damages opinion based on Google's TPU-related revenue, Mr. Green's damages report makes several general references to Google's reported revenues, specifically highlighting its total advertising revenues. *See* Phung Decl., Ex. 18 (Green Rpt.) at 26; *id.* at Exhibit O to Green Report. He states that [REDACTED]

[REDACTED],” provides a chart listing Google's other non-advertising services revenue totaling [REDACTED] between 2017-2021, and makes offhand references to the portion of these revenues ostensibly attributed to use of the TPUs. *Id.* at 26, 83.

And in briefing related to Mr. Green’s testimony, Singular emphasizes that between “2018 and 2022, Google’s advertising revenue alone totaled \$832 billion” Dkt. 507 at 3. Singular’s reference to these figures serves no relevant purpose except to make its proposed damages of [REDACTED] seem modest by comparison and should thus be excluded from trial.

First, Google’s revenues from its products making use of the TPUs are irrelevant because Mr. Green proffers a damages number based only on cost savings—*not* revenue. And aggregate revenue numbers not directly generated from the sale of an allegedly infringing product, such as those in Mr. Green’s report, are “irrelevant to the [damages] expert’s conclusion and [] therefore inadmissible” when the expert “fails to point the Court to any conclusion that actually uses this information.” *Inventio AG v. Thyssenkrupp Elevator Corp.*, No. 08-874-RGA, 2014 WL 554853, at *3 (D. Del. Feb. 6, 2014).

Here, Mr. Green has proposed damages in the form of “a reasonable royalty lump sum payment between [REDACTED]” that is calculated entirely based on the alleged “cost savings to Google that [the] use [of the accused TPU chips] enabled” and not on any actual or projected Google revenues. *See* Dkt. 507 at 4. Mr. Green argues that at a hypothetical negotiation, the parties would have considered three quantitative indicators of benefits from the use of the accused TPU’s: (1) cost savings from the use of the Accused TPUs in comparison to GPUs; (2) the “excess returns” calculated by also assessing Google’s cost savings “from the use of the Accused TPU’s over its required rate of return for ‘Moonshot’ projects”; and (3) “in the alternative to cost savings the parties also would have considered incremental profits that Google expected to be derived from the use of the accused accelerators.” Phung Decl., Ex. 18 (Green Rpt.) at 64.

While Mr. Green gestures that “*in the alternative to cost savings* the parties also would have considered incremental profits,” he does not actually provide any conclusion or opinion as to any specific amount in a reasonable royalty that the parties would have agreed to based on any supposed “incremental profits” or revenues. *Id.* at 64 (emphasis added). Mr. Green calculates the bottom and top of his damages range based solely on cost savings and apportionment. He

calculates the [REDACTED] top of the range “based on the incremental cost savings that Google has experienced from its actual deployments of TPUs” and a 40% apportionment rate. *Id.* at 4, 105. And the [REDACTED] bottom of his range is based on the same “categories of *cost savings*” but with a 23% apportionment rate. *Id.* at 81 (emphasis added). Mr. Green provides no quantitative analysis whatsoever as to how any of Google’s advertising or other product revenues affect either of those numbers. In fact, Singular has expressly admitted that Mr. Green’s royalty base “is *not* based on the market value of the TPU system, [REDACTED] [REDACTED],” but that his royalty based is instead “driven by the . . . cost savings to Google that their use [of the accused TPUs] enabled.” Dkt. 507 at 1, 4 (emphasis added). As a matter of evidence law, Singular thus cannot “claim[] that these [revenues] are relevant for the bargaining positions in a hypothetical negotiation, [when] its damages expert [] does not use [them] in his analysis.” *See Dexcowin Glob., Inc. v. Aribex, Inc.*, No. CV 16-143-GW(AGRx), 2017 WL 3478492, at *13 (C.D. Cal. June 29, 2017).

Second, Mr. Green does not provide sufficient information about Google’s products revenues to offer any proper analysis as to damages based on those figures. He suggests that “Google has not provided documents quantifying [the] revenues” and concedes that “[w]ithout additional detail, on revenue specifically attributed to the Accused TPUs in this matter, [he] cannot determine exact incremental revenue that would have been considered at a hypothetical negotiation.” Phung Decl., Ex. 18 (Green Rpt.) at 3, 83.

But Magistrate Judge Cabell has already decided that Singular was not entitled to discovery into the raw financial revenues of the Google products and services that make some use of TPU systems. In the summer of 2021, Singular filed two motions to compel discovery relating, in part, to the revenues and profits for any products or services making use of the Accused Products. *See* Dkt. 215 at 3; *see also* Dkt. 188 at 5. During the hearing on this dispute, Magistrate Judge Cabell agreed with Google that discovery into “the financials for all of Google’s business units” would be too “onerous” and “too broad” and asked that the parties find “somewhere in the middle.” *See* Dkt. 235 at 14:3-17. The middle compromise that the court

settled on was that to the extent that Google had any analyses that determined the “incremental revenues attributable to the accused products,” “if that data exists and . . . is so . . . [finely] honed that it actually allows one to determine how revenues were affected by the use of this product, . . . [it] should be produced.” Dkt. 235 at 26:24-27:1, 27:9-15. The court then specifically rejected Singular’s suggestion that if such data did not exist, Singular could just be “allowed to do that analysis from . . . revenues and profits.” *Id.* at 28:22-24, 29:2-6.

Mr. Green now acknowledges that even with the incremental revenues data that Google has since provided, he is unable to “determine exact incremental revenue that would have been considered at a hypothetical negotiation,” i.e., because the data does not indicate to what extent, if any, the revenue can be “specifically attributed to the Accused TPUs.” Phung Decl. Ex. 18 (Green Rpt.) at 83. Given that unreliable nature, Mr. Green should be precluded from referencing Google’s ad revenues that he claims is attributed to use of the TPUs. And the Court should not allow Mr. Green to engage in a runaround where he puts forth Google’s ***total services revenues*** that Magistrate Judge Cabell found to be “too broad” to be directly relevant to Singular’s damages analysis. Dkt. 235 at 14:3-17.

Third, even if the court finds that Google’s overall products revenues are somehow relevant, it should preclude Singular from introducing evidence or argument regarding that revenue because the risk of unfair prejudice to Google substantially outweighs any probative value. *See Inventio*, 2014 WL 554853, at *3 (holding that the introduction of overall revenue figures could be excluded under either Rule 401 as irrelevant or under Rule 403 as prejudicial).

The Federal Circuit has repeatedly recognized that the admission of “overall product revenues . . . which have no demonstrated correlation to the value of the patented feature alone, only serve to make a patentee’s proffered damages amount appear modest by comparison, and to artificially inflate the jury’s damages calculation.” *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012). In *Uniloc USA, Inc. v. Microsoft Corp.*, for example, the Federal Circuit found that “the disclosure that a company has made \$19 billion dollars in revenue from an infringing product cannot help but skew the damages horizon for the jury, regardless of

the contribution of the patented component to this revenue.” 632 F.3d 1292, 1320 (Fed. Cir. 2011). It follows that the risk of prejudice here can only be even greater for an **\$832 billion** revenue figure. *See* Dkt. 507 at 3. Permitting Singular to present such staggering figures—with admittedly no analysis or context as to its relation to the actual contribution of the patented component to this revenue—would confuse the jury as to the appropriate royalty base.

Allowing Singular to introduce revenues that represent a majority of Google’s earnings would also prejudice Google by improperly discussing Google’s overall financial condition. *See Carucel Invs., L.P. v. Novatel Wireless, Inc.*, No. 16-cv-118-H-KSC, 2017 WL 1215838, at *20 (S.D. Cal. Apr. 3, 2017), *aff’d*, 730 F. App’x 938 (Fed. Cir. 2018) (precluding evidence of the defendant’s overall revenue and profits because “the probative value, if any, . . . is substantially outweighed by the risk of unfair prejudice”). The court should thus exclude evidence or argument about Google’s revenues generated from the aforementioned products as unfairly prejudicial under Rule 403.

B. The court should preclude Singular from offering evidence or argument about the services or products that make use of the allegedly infringing TPUs.

Singular should also be precluded from offering evidence or argument about the list of 17 Google products and services that make use of the accused TPUs because those products are irrelevant to this case and pose a high risk of jury confusion. Mr. Green references these products and services in his report and specifically names: [REDACTED]

[REDACTED]

[REDACTED]. Phung Decl., Ex. 18 (Green Rpt.) at 82-83.

Discussion of the above products and services serves no relevant purpose in either establishing infringement or supporting any damages analysis. Singular has not accused any of the 17 products and services of infringement, and the use of these products and services by Google does not factor into the infringement analysis of its TPU systems. And as discussed above, Mr. Green’s ultimate damages conclusion—a reasonable royalty range of [REDACTED]

██████████—is based entirely on calculations of cost savings and does not factor in any revenue from the 17 products and services.

Furthermore, the Court should preclude evidence or argument about the 17 products and services under Rule 403 because they would unfairly prejudice Google, confuse the jury, and waste time. While Mr. Green makes general statements that these products use the accused TPUs, he provides no actual analysis about how the *alleged infringing functionality* of the TPUs, i.e., multiple execution units performing arithmetic within the TPU chips, is used by these products and services, which involve a host of non-infringing features in the TPU *systems* and other non-infringing technology. Given the attenuated link between these products and the accused TPUs, Singular should not be able to suggest that its alleged invention is responsible for the success of these products and cause the jury to improperly assume that all revenue from these products is attributable to the alleged invention. Moreover, the risk of prejudice is heightened here because many of these products and services—particularly the ones Mr. Green has specifically enumerated in his report—are well known and widely used by the public. *See Phung Decl., Ex. 18 (Green Rpt.)* at 82-83 (listing ██████████
██████████). Reference to these widely used products and services would confuse the jury as to which products are actually being accused of infringement and skew its perception regarding the breadth of infringement. And if Singular is allowed to present such evidence or argument, Google would be forced to rebut it with multiple witnesses to provide context for this long list of non-infringing products and services, which would distract from the merits of the case by creating mini-trials about the relationship between these products and infringement as well as damages. The court should thus exclude any evidence or argument about the 17 products and services that make use of the accused TPUs under Rules 401 and 403.

VII. MOTION *IN LIMINE* NO. 6: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING EVIDENCE OR ARGUMENT ABOUT THE WEALTH OR COMPENSATION OF GOOGLE’S CURRENT OR FORMER FOUNDERS, EXECUTIVES, OR EMPLOYEES.

Discussion of the wealth or compensation of any of Google’s founders, executives, or employees—including those who are witnesses testifying at trial—is irrelevant to this case and risks confusing the jury, unfairly prejudicing Google, and wasting time. Google thus moves, under Federal Rules of Evidence 401 and 403, to preclude Singular from introducing evidence, testimony, or argument about the wealth and compensation of any individuals who are or were Google’s current or former founders, executives, or employees.

Courts have excluded this type of evidence because evidence of a witness’s “compensation and personal wealth might aggravate the sensibility of, and distract, more modestly compensated or resourced jurors, and thus be more unfairly prejudicial than probative.” *Keefe v. LendUS, LLC*, — F. Supp. 3d —, No. 20-cv-195-JL, 2023 WL 2326451, at *3 (D.N.H. Mar. 2, 2023). Singular has designated for use at trial the following exchange from the deposition of one of Google’s employees, Jeff Dean, in which Singular’s attorney asked Dr. Dean, [REDACTED] Phung Decl., Ex. 24 at 48:23-24. This argumentative line of questioning into the personal wealth of Google’s employees bears no relevance to Singular’s claims, as Singular’s experts do not proffer any infringement or damages opinion based on the wealth or compensation of any of Google’s founders, executives, or employees.

To the extent Singular claims such evidence is relevant to witness bias, evidence “regarding [the] wealth and compensation” of Google’s employees is “far more likely to be prejudicial than to be probative”—particularly when, as with a witness like Dr. Dean, these “individuals’ interest in [Google] is already clear” from their tenure and maintenance of various leadership positions at Google. *See Finjan, Inc. v. Sophos, Inc.*, No. 14-cv-01197-WHO, 2016 WL 4560071, at *14–15 (N.D. Cal. Aug. 22, 2016) (granting motion to exclude information regarding the wealth and compensation of a party’s employees and founders despite argument that such evidence was relevant to witness bias). And when a witness’s relationship with a party

is “continuous, ongoing, and not limited to litigation purposes” such as that of “employees [rather] than retained experts, absent contextual information concerning the financial interests of other similarly-situated fact witnesses,” evidence of employee compensation “would be more unfairly prejudicial than probative” and violative of the employees’ “rights to privacy.” *See Finjan, Inc. v. Blue Coat Sys., Inc.*, No. 13-cv-03999-BLF, 2015 WL 4129193, at *4 (N.D. Cal. July 8, 2015) (cleaned up). So if Singular were allowed to present evidence about the wealth or compensation of Google’s employees, Google would be forced to put forth additional evidence on Google’s compensation structures to provide such “contextual information,” which would distract from the merits of the case, confuse the jury, and waste time. Singular should thus be precluded from making any reference to the wealth or compensation of any of Google’s founders, executives, or employees.

VIII. MOTION *IN LIMINE* NO. 7: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING EVIDENCE OR ARGUMENT REGARDING GOOGLE’S CORPORATE ACQUISITIONS.

The Court should preclude Singular from presenting any evidence or argument regarding Google’s corporate acquisitions or investments. In his expert report, Singular’s damages expert, Philip Green, presents a laundry list of Google’s past acquisitions and investments in companies that, according to him, “related to artificial intelligence,” with amounts ranging from [REDACTED] [REDACTED] Phung Decl., Ex. 18 (Green Report) at 89–90. He does not explain any purported relevance of these transactions to the hypothetical negotiation framework for determining a reasonable royalty; he simply “note[s]” that Google [REDACTED] [REDACTED]” and that Google [REDACTED] [REDACTED]” *Id.* at 89, 108. The Court should exclude all such evidence⁹ and related argument as irrelevant under Rule 402, or in the alternative under Rule 403 based on the significant risk of confusion and unfair prejudice that substantially outweighs any probative value. The Court should also preclude Singular from introducing such evidence through other

⁹ This evidence includes Phung Decl., Exs. 26–33 (STX 659, 677, 678, 688, 689, 699, 700, 715, as identified on Singular’s initial exhibit list).

avenues besides Mr. Green—e.g., via cross examination of Google’s witnesses—which would pose an equal if not greater risk of juror confusion and unfair prejudice.

The sums Google has invested in other companies or has paid to acquire them have no bearing on any issue that the jury will be tasked to decide; they are irrelevant and thus not admissible under Rule 402. Even Mr. Green does not opine that these transactions are in any way relevant to his analysis (much less explain how they factor into his opinions). But even setting aside his silence on the relevance of these transactions, courts routinely exclude evidence of corporate investments and acquisitions because an investment in or purchase of another company is generally not probative of the terms the parties would have agreed to at a hypothetical negotiation for a license to the asserted patents. *See, e.g., Limelight Networks, Inc. v. XO Commc’ns, LLC*, No. 3:15-cv-720-JAG, 2018 WL 678245, at *3–4 (E.D. Va. Feb. 2, 2018) (precluding patentee’s expert from offering reasonable royalty opinion based on defendant’s “prior acquisition of a different corporation,” noting that “the Federal Circuit has cautioned trial courts against presenting juries with such potentially prejudicial analysis”); *Parkervision, Inc. v. Qualcomm Inc.*, No. 3-11-cv-719-OrITEM, 2013 WL 12152672, at *6 (M.D. Fla. Oct. 11, 2013) (precluding damages expert from testifying to corporate acquisition “to opine on the amount of a reasonable royalty” in part because acquisition “was not a patent license at all”); *Function Media, L.L.C. v. Google Inc.*, No. 2:07-CV-279, 2010 WL 272409, at *2 (E.D. Tex. Jan. 15, 2010) (precluding plaintiff’s expert from “offering any opinions or testimony regarding the dollar amount [defendant] paid to acquire any organization”). That rationale applies with special force here, as Mr. Green does not even attempt to compare the cited investments and acquisitions to a hypothetical license to Singular’s asserted patents—much less apportion these transactions to isolate some portion that might be comparable to the asserted patents or explain how some portion of the transactions constitutes comparable technology. Nor does he explain what weight these transactions should be given in a reasonable royalty analysis. Indeed, he admits that he **does not even have sufficient information to do so**. Mr. Green states, for example, that Google acquired DeepMind in 2014 for approximately [REDACTED] but admits he is [REDACTED]

[REDACTED]

[REDACTED] Phung Decl., Ex. 18 (Green Report) at 89. Similarly, Mr. Green states that [REDACTED] but admits that [REDACTED]” *Id.* Ultimately, Mr. Green’s testimony on this subject, if allowed, will amount to little more than a laundry list of Google’s investments in or acquisitions of various companies that (purportedly) “related to artificial intelligence” and the amount Google (purportedly) paid or invested, which has no probative value for the jury’s assessment of a reasonable royalty or any other issue in the case, and should therefore be excluded as irrelevant under Rule 402. *Id.*

Even if Mr. Green could articulate some minimal relevance—which is not expressed in his report and would thus be subject to exclusion for non-disclosure under Fed. R. Civ. P. 37(c)(1)—the danger of juror confusion and undue prejudice to Google substantially outweighs any minimal probative value, justifying exclusion under Rule 403. *See Fujifilm Corp. v. Motorola Mobility LLC*, No. 12-CV-03587, 2015 WL 1737951, at *16 (N.D. Cal. Apr. 8, 2015) (granting motion *in limine* under Rule 403 to preclude plaintiff’s damages expert from discussing cost of defendant’s “recent acquisition” of another company). Absent exclusion, the jury will hear that Google was able to pay large sums, ranging into [REDACTED] to buy or invest in (purportedly) AI-related companies, which “cannot help but skew the damages horizon for the jury” and “serve to make [Singular’s] proffered damages amount appear modest by comparison.” *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012); *see also Vaporstream, Inc. v. Snap Inc.*, No. 2:17-cv-00220-MLH (KSx), 2020 WL 2543814, at *7–8 (C.D. Cal. Jan. 10, 2020) (excluding evidence of defendant’s “acquisition offers” because “even assuming [they] . . . have some relevance to [expert’s] reasonable royalty analysis, these large numbers carry a substantial danger of unfair prejudice to [defendant] by skewing the damages horizon for the jury”). The jury may also be influenced by the size of these transactions to award or assess damages on an improper basis, such as that Google has “deep pockets.” *See Martinez v. City of Chicago*, No. 14-cv-369, 2016 WL 3538823, at *14 (N.D. Ill. June 29, 2016) (finding

“deep pockets” arguments against defendant to be “highly prejudicial”). Moreover, Google expects Singular to portray itself as an “AI-related” company, which will implicitly invite the jury to improperly conclude that Google’s past investments in or acquisitions of (purportedly) AI-related companies are a suitable measure of damages.¹⁰ In short, evidence of Google’s past corporate acquisitions and investments creates serious risks that the jury will be led astray in ways that unfairly prejudice Google, and those risks substantially outweigh any minimal probative value. Evidence of these transactions should therefore be excluded under Rule 403 even if minimally relevant.

IX. MOTION *IN LIMINE* NO. 8: SINGULAR SHOULD BE PRECLUDED FROM OFFERING EVIDENCE OR ARGUMENT REGARDING THE COURT’S CLAIM CONSTRUCTION ORDER.¹¹

Singular should not be permitted to offer evidence or argument that references the Court’s reasoning in the Claim Construction Order—including the Court’s assessment of the parties’ positions—other than the claim constructions themselves.¹²

It is axiomatic that “claim construction cannot be argued to the jury.” *Cordis Corp. v. Bos. Sci. Corp.*, 561 F.3d 1319, 1338 (Fed. Cir. 2009). Thus, Singular should not be permitted to offer evidence and argument regarding the Court’s reasoning in its Claim Construction Order, including the Court’s assessment of the parties’ positions. Indeed, any evidence and argument

¹⁰ Indeed, this appears to be Mr. Green’s exact objective in “not[ing]” Google past corporate investments and acquisitions, as he focuses only on transactions that (purportedly) “related to artificial intelligence,” to the exclusion of the many other types and categories of businesses that Google has invested in or acquired over the years. Phung Decl., Ex. 18 (Green Report) at 89–90.

¹¹ The parties have stipulated that neither party shall introduce evidence, testimony, or argument regarding positions taken or arguments made by either party in connection with the briefing before the Court on claim construction. This motion is directed only to evidence and argument regarding the Court’s *reasoning* in its Claim Construction Order; the parties were unable to reach a stipulation regarding such evidence or argument.

¹² As noted in Google’s pending Motion to Exclude Certain Expert Testimony of Dr. Khatri, Dr. Khatri’s deposition testimony suggests that he might offer improper claim construction testimony before the jury, concerning a phrase that appears in the Court’s construction of “execution unit”; specifically, “processing element.” See Dkt. 480 at 3-6. The Court should preclude Dr. Khatri from engaging in such impermissible claim construction. See, e.g., *MediaTek Inc. v. Freescale Semiconductor, Inc.*, No. 11-cv-5341-YGR, 2014 WL 971765, at *4 (N.D. Cal. Mar. 5, 2014).

regarding the Court's assessment of those positions is irrelevant, and will only confuse the jury. The Court has construed the terms in dispute and those express constructions govern the scope of the asserted claims. Thus, evidence or argument beyond the claim constructions themselves is irrelevant, and should be excluded because "[i]rrelevant evidence is not admissible." Fed. R. Evid. 402; *see also Hypertherm, Inc. v. Am. Torch Tip Co.*, No. 05-cv-373-JD, 2009 WL 435324, at *1-2 (D.N.H. Feb. 19, 2009) (granting motion *in limine* to exclude evidence regarding "the parties' positions on claim construction"). Further, presenting evidence or argument to the jury regarding the Court's reasoning in its Claim Construction Order would only confuse the jury and risks inviting the jury to substitute its own interpretation of the claims for the Court's express constructions. Finally, evidence or argument regarding instances in which the Court did not adopt Google's proposed claim constructions would also unduly prejudice Google in the eyes of the jury, and such evidence is thus inadmissible under Federal Rule of Evidence 403.

X. MOTION *IN LIMINE* NO. 9: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING ARGUMENT OR EVIDENCE THAT DR. BATES INVENTED LPHDR EXECUTION UNITS OR THAT DR. BATES WAS THE FIRST TO UNDERSTAND THE BENEFITS OF LPHDR EXECUTION UNITS.

The Court should preclude Singular from presenting any evidence or argument at trial that: (i) Dr. Bates invented LPHDR execution units or (ii) Dr. Bates was the first to understand the benefits of LPHDR execution units.

Evidence or argument that has a likelihood of confusing or misleading the jury as to the scope of the patented invention should be precluded under Rule 403. *See Plexxikon Inc. v. Novartis Pharms. Corp.*, No. 17-cv-04405-HSG, 2021 WL 2224267, *3-4 (N.D. Cal. June 2, 2021) (precluding patentee from introducing evidence of unpatented elements "as its invention" or equating such elements "to the asserted patents" because it would broaden the "invention at issue"). Here, the deposition testimony of Dr. Khatri and his expert reports suggest that Singular will attempt to introduce such evidence at trial. Singular should be precluded from doing so.

A. Singular should be precluded from offering evidence or argument that Dr. Bates invented LPHDR execution units.

Singular should also be precluded from offering evidence or argument that Dr. Bates invented LPHDR execution units. In June 2022, the PTAB determined that claims in the asserted patents directed to LPHDR execution units were obvious over the prior art and thus unpatentable. *See* Dkt. 361-19 at 25-26, 85; 361-21 at 25, 83. Indeed, the PTAB found that the prior art taught “the recited LPHDR execution unit.” Dkt. 361-19 at 28. Singular is not appealing that ruling and is thus bound by the PTAB’s decision, and cannot assert arguments to the contrary. *See Intellectual Ventures I, LLC v. Lenovo Grp. Ltd.*, 370 F. Supp. 3d 251, 256 (D. Mass. 2019) (“A final judgment from the PTAB on the invalidity of a patent claim has an issue-preclusive effect on any pending actions involving that patent.”).

Thus, for example, neither Dr. Bates nor Dr. Khatri should be permitted to testify that Dr. Bates invented LPHDR execution units, or that LPHDR execution units are the novel aspect of the asserted claims. Dr. Khatri’s opening and rebuttal reports as well as related deposition testimony, however, suggest that Singular may attempt to elicit such testimony. For example, Dr. Khatri’s rebuttal report credits as novel “[REDACTED]

[REDACTED]” *see* Phung Decl., Ex. 34 (Khatri Rebuttal Rpt.) ¶ 267, and he makes numerous statements in his opening report suggesting that Dr. Bates was the first to invent LPHDR execution units, *see id.*, Ex. 22 (Khatri Rpt.) ¶¶ 62-68. Similarly, Dr. Khatri testified at deposition that Dr. Bates was the [REDACTED] to describe the uses and benefits of LPHDR execution units. *See id.*, Ex. 35 (Khatri 3/24/23 Tr.) at 578:24-583:3.¹³ Because LPHDR execution units were *not* novel at the time of Dr. Bates’s alleged invention, any testimony to the contrary would be misleading, confusing, and unfairly prejudicial.

¹³ Dr. Khatri’s testimony on this topic and the paragraphs of his report cited herein are also addressed in Google’s pending Motion to Exclude Certain Expert Testimony of Sunil Khatri, Ph.D. *See* Dkt. 480 at 11-12, 19-20. Regardless of how the Court rules on that Motion, the potential for confusion and undue prejudice under Rule 403 provides an independent basis for excluding any testimony that tracks these paragraphs in his report.

B. Singular also should be precluded from offering evidence or argument that Dr. Bates was the “first to understand” the benefits of LPHDR execution units in any specific context, such as a parallelism.

Apart from being barred from presenting evidence or argument that Dr. Bates invented LPHDR execution units, Singular also should not be permitted to get around the fact that Dr. Bates indisputably did not invent LPHDR execution units by arguing that he was the “first” to recognize the benefits of operations utilizing such units in any specific context, such as parallel processing. Allowing such evidence or argument would create confusion and create the risk that the jury would improperly credit Dr. Bates with invention of the LPHDR execution unit.

Dr. Khatri’s opening report suggests Singular will try to do this: for example, Dr. Khatri opines that Dr. Bates was the [REDACTED]

[REDACTED].”

Phung Decl., Ex. 22 (Khatri Rpt.) ¶ 68. Not only is any argument or evidence to the contrary irrelevant to determining whether Google infringed the asserted claims—willfully or otherwise—it will only confuse the jury as to the scope of Dr. Bates’s claimed invention. Accordingly, it should be precluded. *See Plexikon*, 2021 WL 2224267, *3-4. The potential for confusion is compounded by the fact that any purported opinion that Dr. Bates was the “first” to recognize the benefits of using reduced precision floating point formats in terms of increased parallelism is unsupported by Dr. Khatri in his report. He makes this statement in conclusory fashion in a background section of his non-infringement report, without offering any basis or support for it.

Furthermore, Dr. Khatri does not address evidence in the record that refutes his statement. As noted above, Dr. Khatri opines that Dr. Bates was the [REDACTED]

[REDACTED]

[REDACTED] Phung Decl., Ex. 22 (Khatri Rpt.) ¶ 68. But Google’s trial exhibit DTX1260, which is the thesis of Dr. Pavle Belanovic published in May 2002, directly refutes Dr. Khatri’s opinion that Dr. Bates was the first to recognize this benefit. The 2002 thesis states: “Minimizing bitwidths of signals carrying those values makes more *parallel implementations* possible and reduces power dissipation of the circuit.” *See* Phung Decl., Ex. 36

(emphasis added). Dr. Khatri makes no effort to address, much less distinguish, that statement. Likewise, Dr. Khatri does not even attempt to square his assertion with the work of Dr. Miriam Leeser, an anticipated trial witness, who publicly explained in 2002 that employing a “narrower bitwidth” would allow for use of “fewer hardware resources” and “more parallelism.” Because Dr. Bates was indisputably *not* the first individual to recognize the benefits of reduced precision floating point arithmetic in terms of parallel processing, Singular should be precluded from offering any evidence or argument suggesting otherwise.

XI. MOTION *IN LIMINE* NO. 10: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING ARGUMENT OR EVIDENCE ABOUT DR. BATES’S PAST STATEMENTS, INCLUDING DR. BATES’S NOTES TO HIMSELF.

Singular should be precluded from introducing Dr. Bates’s past hearsay statements, including Dr. Bates’s notes to himself, which are self-serving and include multiple layers of hearsay.

Hearsay is a statement “the declarant does not make while testifying at the current trial or hearing” that is offered “in evidence to prove the truth of the matter asserted.” Fed. R. Evid. 801(c). As a general rule, hearsay is inadmissible unless it falls within an exception found within the Federal Rules of Evidence. *See* Fed. R. Evid. 802. Evidence that contains multiple layers of hearsay is admissible under Federal Rule of Evidence 805 only if each layer “fall[s] under a hearsay exception or exclusion.” *Bourassa v. MassCor Optical Indus.*, 548 F. Supp. 3d 262, 267 (D. Mass. 2021).

Singular’s exhibit list indicates that Singular intends to introduce documents that constitute hearsay, for which no exception or exclusion applies. For example, Singular designated as a trial exhibit Dr. Bates’s notes regarding his September 17, 2013, presentation to Google Brain, which is replete with double hearsay. *See* Phung Decl., Ex. 37 (e.g., [REDACTED]

[REDACTED]). This document is Dr. Bates’s out-of-court statement and is presumably being offered for the truth of the matter asserted: that Google was aware of and showed interest in Dr. Bates’s technology before

Singular filed suit.¹⁴ No exception to the hearsay rule applies to this document, thus, Singular should be precluded from offering it at trial.

First, the only conceivable exception would be for a “present sense impression” under Rule 803(1); however, that exception does not apply, because Dr. Bates did not draft the notes “contemporaneously or immediately after” relaying or perceiving the purported information recorded. *See Allscripts Healthcare, LLC v. DR/Decision Resources, LLC*, 521 F. Supp. 3d 112, 122 (D. Mass. 2021) (noting that “statements made more than 20 minutes after the relevant event almost certainly do not” qualify as contemporaneous for purposes of Rule 803(1)); *see also Kennedy v. Cingular Wireless, LLC*, No. 2:06-cv-00975, 2008 WL 11453683, at *3 (S.D. Ohio Feb. 15, 2008) (rejecting present sense impression exception because “the text of plaintiff’s typewritten notes contain editorial characterizations of the facts, which suggest he had ruminated over the events before he typed his notes”).

Indeed, deposition testimony indicates that Dr. Bates’s notes were *not* drafted during or immediately after his presentation. Dr. Bates testified that after his presentation, he talked with Jeff Dean for [REDACTED] during which Dr. Dean allegedly asked him if he [REDACTED] [REDACTED] Phung Decl., Ex. 17 (Bates 7/20/2021 Tr.) at 151:22-152:9. [REDACTED] also testified that after Dr. Bates’s presentation, they had “[REDACTED] [REDACTED]” *Id.*, Ex. 24 at 136:3-9; *see also id.* at 137:12-13 [REDACTED] [REDACTED]). There is no suggestion that Dr. Bates was actively taking notes either during his *own* presentation or during his conversation after the presentation with Dr. Dean; any argument to the contrary would be absurd.

Second, Singular cannot meet the “heavy burden” of showing that the “residual exception” under Rule 807, which “is utilized only in exceptional circumstances,” is applicable

¹⁴ To the extent Singular purports to offer the notes for something other than the truth of the matter asserted, a motion *in limine* is still appropriate. Having an order *in limine* as to the notes will ensure that the Court can confirm that the notes are not being offered for their truth (in the context of trial testimony), rather than having them referred to prior to the Court making that ruling.

here. *See NGM Ins. Co. v. Santos*, 483 F. Supp. 3d 1, 7 (D. Mass. 2020) (cleaned up). That exception applies only if the proponent can demonstrate that the proffered hearsay is “supported by sufficient guarantees of trustworthiness,” or “more probative on the point for which it is offered than any other evidence that the proponent can obtain through reasonable efforts.” Fed. R. Evid. 807(a). Singular cannot do so. Indeed, courts have found that an individual’s notes, which include purported statements by others, are unreliable and constitute inadmissible multiple hearsay. *See, e.g., Kennedy*, 2008 WL 11453683, at *2-3; *Thomas v. City of Cedar Park, TX*, No. A-07-CA-002-LY, 2008 WL 11415902, *3-4 (W.D. Tex. May 7, 2008), *report and recommendation adopted*, 2008 WL 11417090 (W.D. Tex. June 3, 2008).

Similarly, Singular designated as a trial exhibit Dr. Bates’s notes regarding a call purportedly with Google employees [REDACTED] on January 24, 2014, that also contains double hearsay. *See Phung Decl., Ex. 38 (e.g., [REDACTED] [REDACTED])*. Again, this document is an out-of-court statement presumably being offered for the truth of the matter asserted: that Google was aware of and showed some level of interest in Dr. Bates’s technology before Singular filed suit. As with Dr. Bates’s notes regarding his September 2013 presentation, no exception to the hearsay rule applies. Indeed, there is no indication from the notes themselves that they constitute a “present sense impression,” and any belated testimony from Dr. Bates on that score would be unreliable and self-serving. Nor can Singular meet its heavy burden to demonstrate that the “residual exception” under Rule 807 is applicable.

Singular also designated as a trial exhibit a document reflecting Dr. Bates’s notes from purported meetings and calls with Google employees between November 2010 and July 2011; that document is also riddled with multiple layers of hearsay. *See Phung Decl., Ex. 39 (e.g., [REDACTED] [REDACTED] [REDACTED])*. Like Dr. Bates’s other “notes” documents, this document is an out-of-court statement presumably being offered for the truth of the matter asserted: that

Google was aware of and showed some level of interest in Dr. Bates's technology before Singular filed suit. Also like Dr. Bates's other notes, there is no exception to the hearsay rule that applies to this document, such that it would be admissible. As with the previously discussed documents, there is no indication that this compilation of Dr. Bates's notes constitutes a "present sense impression," and any belated testimony from Dr. Bates on that score would be unreliable and self-serving. Further, Singular cannot meet its heavy burden to show that the "residual exception" under Rule 807 is applicable.

Accordingly, Singular should be precluded from offering at trial Dr. Bates's notes to himself regarding past statements to Google, including the documents discussed above, because they constitute hearsay, and no exception applies.

XII. MOTION *IN LIMINE* NO. 11: SINGULAR SHOULD BE PRECLUDED FROM OFFERING EVIDENCE OR ARGUMENT THAT THE ALLEGED INVENTION WOULD HAVE HAD MORE COMMERCIAL SUCCESS IF NOT FOR DR. BATES'S PURPORTED RELATIONSHIP WITH GOOGLE AND GOOGLE'S ALLEGED INFRINGEMENT.

The Court should preclude evidence and argument by Singular that attempts to link Google to the claimed invention's lack of commercial success. According to Singular, Dr. Bates's [REDACTED]

[REDACTED] between the parties. Phung Decl., Ex. 18 (Green Rpt.) at 91–92.

Singular has also claimed that since Google allegedly began infringing, Dr. Bates "has been struggling to commercialize and license" the asserted patents due to Google's use of the accused technology and dominance in the artificial intelligence market. Dkt. 491 at 1 (Opp. to Google's Mot. to Continue) (arguing that "Google began using Dr. Bates's invention in March 2017," and "[m]eanwhile, Dr. Bates has been struggling to commercialize and license the invention given the presence of Google, the largest AI provider on the planet, openly using the invention for free"). Singular should not be permitted to make these or related arguments before the jury, because (1) they are irrelevant and (2) they are unduly prejudicial and confusing.

First, Google's purported impact on Singular's business is not relevant to any issue in this case, including damages, and therefore the evidence should be excluded. *See* Fed R. Evid.

401, 402. Singular seeks damages in the form of a reasonable royalty based on a hypothetical negotiation between the parties. Singular explicitly concedes that [REDACTED] [REDACTED] Singular [REDACTED] [REDACTED] or otherwise compete with Google. Phung Decl., Ex. 18 (Green Rpt.) at 91–92. As Singular acknowledges, “the commercial relationship between the parties . . . would have been that of an inventor and promoter,” and that relationship was *not* characterized by “competition for sales between the licensor and hypothetical licensee.” *See id.* (arguing that meetings between Google and Singular are relevant despite lack of competition between the parties); *see also Probatton Sports, LLC v. Sports Tutor, Inc.*, 586 F. Supp. 3d 80, 102 (D. Conn. 2022), *aff’d*, No. 2022-1814, 2023 WL 7548208 (Fed. Cir. Nov. 14, 2023) (describing that when parties are not “direct competitors,” “the license of the Patents-in-Suit would not have limited [the patentee’s] core business”). Because Singular concedes that the parties were not competitors, whether Google’s conduct had any impact on Singular’s business is not relevant to any issue of consequence, and therefore it should be excluded. 1 McCormick On Evid. § 185 (8th ed.) (“To the extent that the evidence is offered to help prove a proposition that is not a matter in issue, it is immaterial.”).

To be sure, evidence related to the alleged infringer’s impact on the patentee’s business is relevant where the patentee seeks damages in the form of lost profits. This theory would have required Singular to show “a reasonable probability that, but for the infringement, [Singular] would have made the sales that were made by the infringer.” *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1557 (Fed. Cir. 1995). Lost profit damages, however, are distinct from reasonable royalty damages. The Federal Circuit has acknowledged this distinction, and the fact that different evidence is relevant to each form of damages. In *AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1333–34 (Fed. Cir. 2015), for example, the Federal Circuit noted that “the harm that [the patentee] actually suffered [was] more suited to a case involving lost profits.” *Id.* “The reasonable royalty theory of damages,” by contrast, “seeks to compensate the patentee *not* for lost sales caused by the infringement, but for [the patentee’s] lost opportunity to obtain a

reasonable royalty.” *Id.* Having chosen not to recover lost profit damages, Singular cannot be allowed to offer irrelevant evidence in a bid for an inflated damages award.

Google’s purported impact on Singular’s business is not relevant to objective indicia of nonobviousness, either. Those indicia require consideration of factors like Singular’s “commercial success.” *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 660 (Fed. Cir. 2000). Commercial success, however, relates to the state of Singular’s business, which is generally demonstrated through the patentees’ “sales figures coupled with market data.” *Tec Air, Inc. v. Denso Mfg. Michigan Inc.*, 192 F.3d 1353, 1361 (Fed. Cir. 1999). That inquiry, however, does not provide a basis for Singular to introduce evidence that its business was in fact **unsuccessful** and that Google should be blamed for any impact on Singular’s business. Because evidence of Google’s impact on Singular’s business is not relevant to damages, obviousness, or any other issue, it should be excluded under Rules 401 and 402.

Second, Singular should not be permitted to advance evidence or argument linking Google to Singular’s lack of commercial success because it is confusing. It would allow Singular to advance evidence that contradicts its damages expert’s reasonable royalty opinion. *See Phung Decl.*, Ex. 18 at 91-92 (Green Report) (Green acknowledging that Google and Singular were not competitors). The Federal Circuit has acknowledged the distinction between these two damages theories, rejecting patentees’ attempts to ascribe their diminished bottom line to infringement and cautioning against “intermingling of the lost profits and the reasonable royalty methods of calculating damages.” *AstraZeneca*, 782 F.3d at 1334 n.3. Therefore, the argument that the “alleged infringement has resulted in lost profits” or that “insinuate[s]” that “lost profits, lost sales, or lost customers are compensable as damages in excess of a reasonable royalty” should be excluded. *Genband US LLC v. Metaswitch Networks Corp.*, No. 2:14-cv-33-JRG-RSP, 2016 WL 125503, at *4 (E.D. Tex. Jan. 9, 2016). “Admitting such evidence carries with it a substantial risk of jury confusion.” *Id.*; Fed. R. Evid. 403.

Furthermore, any attempt to push blame on Google for Singular’s lack of commercial success would serve no purpose other than impermissibly suggesting to jurors that Singular

would have earned greater profits and revenue if not for Google’s infringement. Indeed, Singular has previewed that it plans to turn this patent infringement trial into a story of David and Goliath, with Dr. Bates as a “struggling” inventor, cast against Google, “the largest AI provider on the planet.” Dkt. 491 at 3. So even assuming this evidence and argument were relevant, its probative value would be substantially outweighed by the potential unfair prejudice to Google in the form of an inflated damages award that compensates Singular for its lack of success—damages Singular expressly isn’t seeking—instead of a reasonable royalty. *See McGinley v. Luv n' care, Ltd.*, No. 3:17-CV-00821, 2023 WL 6372877, at *4 (W.D. La. Sept. 28, 2023) (precluding patentee “from offering evidence comparing the size of Defendants’ business to Plaintiffs’ business,” which “would create an unfair characterization of Defendants as a Goliath, against Plaintiffs as David.”); *Cf. Echavarria v. Roach*, No. 16-cv-11118-ADB, 2022 WL 606076, at *2 (D. Mass. Mar. 1, 2022) (precluding evidence that “may lead to a deflated damages award”). Singular should not be permitted to introduce evidence—even if it were marginally relevant—to transform this patent infringement case into one about Google’s alleged impact on a fledgling inventor.

The Court should exclude evidence and argument blaming Google for Singular’s lack of commercial success because it is irrelevant and could pollute the jury’s reasonable-royalty damages determination with a confusing and unfairly prejudicial narrative. *See Fed. R. Evid.* 401, 402, 403.

XIII. MOTION *IN LIMINE* NO. 12: SINGULAR SHOULD BE PRECLUDED FROM OFFERING EVIDENCE, ARGUMENT, OR TESTIMONY ABOUT DR. BATES’S PERSONAL FINANCIAL STATUS, WEALTH, AND ANY FUTURE DISPOSITION OF ASSETS SHOULD SINGULAR PREVAIL.

Singular’s litigation conduct suggests that it intends to have Dr. Bates offer testimony about his personal wealth and financial status to prejudice the jury against Google by suggesting that Dr. Bates would be wealthier but for Google’s alleged infringement of the asserted claims of the patents-in-suit. For example, in opposing Google’s motion to stay pending IPR, Singular submitted a declaration from Dr. Bates stating that “[f]or ten years [his] family lived almost

entirely off [their] savings” and that Google had allegedly “made [his] path difficult” because “[i]t is hard to convince people to contribute to a project whose main technology has been appropriated by a trillion dollar company.” Dkt. 201-1 ¶¶ 8, 10.

However, the only financial issue in this case is the amount of reasonable royalty that Singular is owed if Google is found liable for infringement, and Dr. Bates’s personal wealth has no bearing on this issue. Thus, evidence regarding Dr. Bates’s personal wealth is irrelevant under Fed. R. Evid. 401 and should be excluded under Fed. R. Evid. 402. Furthermore, to the extent Dr. Bates’s personal wealth is relevant at all, its relevance is far outweighed by the prejudice to Google from the suggestion that Google is the cause of Dr. Bates’s financial situation, or that Google must be culpable because of Google’s or Google’s employees’ financial standing relative to Dr. Bates. *See, e.g., United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 239, (1940) (“appeals to class prejudice are highly improper and cannot be condoned and trial courts should ever be alert to prevent them”); *Van Bumble v. Wal-Mart Stores, Inc.*, 407 F.3d 823, 826 (7th Cir. 2005) (affirming exclusion of plaintiffs’ financial situation in personal injury case because “[e]vidence regarding the [plaintiffs’] insurance status and relative wealth or poverty is irrelevant and would have been prejudicial to the jury’s determination of damages”); *Garcia v. Sam Tanksley Trucking, Inc.*, 708 F.2d 519, 522 (10th Cir. 1983) (“Reference to the wealth or poverty of either party, or reflection on financial disparity, is clearly improper argument.”) (citing *Socony-Vacuum Oil*, 310 U.S. at 239); *SynQor, Inc. v. Vicor Corp.*, No. 2:14-CV-287-RWS-JBB, 2022 WL 7219272, at *6 (E.D. Tex. Oct. 7, 2022) (in patent case, holding that “[b]oth sides are precluded from introducing evidence of the personal wealth, income, and/or net worth of fact witnesses”).

Singular should also be precluded from offering evidence or argument about how Dr. Bates intends to use any monetary award he receives from Google should Singular prevail. In prior filings with this Court, Dr. Bates has stated that he plans to donate any money he receives to charity. *See, e.g.*, Dkt. 201-1 ¶ 9. But evidence regarding Dr. Bates’s alleged intent to donate money to charity is irrelevant to the question of reasonable royalty, and is also highly prejudicial,

and should thus be excluded. *See, e.g.*, Order on Motions *in Limine* at 4, *Estech Systems IP, LLC v. Carvana LLC*, No. 2:21-cv-00482-JRG-RSP (E.D. Tex. Apr. 11, 2013), Dkt. 349 (in patent case, precluding plaintiff’s founder from “offering testimony related to any future charitable donations, especially relating to any verdict in this action”); *Drake v. Allergan, Inc.*, No. 13-cv-234, 2014 WL 12717873, at *1 (D. Vt. Oct. 23, 2014) (granting motion *in limine* in products liability case excluding testimony that “the Plaintiffs intend to donate some portion of a damages award to charity” because “that fact would not be probative”).

Dr. Bates has also stated in prior filings his belief it is necessary for him to receive money from Google so that he can use the money to somehow protect the United States (and all “democratic citizens of the world”) against China and other “threats foreign and domestic.” Dkt. 201-1 ¶¶ 3, 11. Dr. Bates’s speculative and xenophobic beliefs regarding the need to pay him money so that he can protect the United States are likewise irrelevant to infringement, validity, or reasonable royalty and are further highly prejudicial, and thus must also be excluded. *See, e.g.*, *Commil USA, LLC v. Cisco Sys., Inc.*, 720 F.3d 1361, 1370 (Fed. Cir. 2013) (finding no error in granting new trial in patent case where “[t]hroughout trial, Cisco attempted to instill in the jury, through irrelevant references to ethnicity and religion, an ‘us versus them’ mentality”), *vacated in part on other grounds*, 575 U.S. 632 (2015); *United States v. Runyon*, 707 F.3d 475, 494 (4th Cir. 2013) (“The Supreme Court has long made clear that statements that are capable of inflaming jurors’ racial or ethnic prejudices ‘degrade the administration of justice.’”) (quoting *Battle v. United States*, 209 U.S. 36, 39 (1908)); *Illumina, Inc. v. BGI Genomics Co.*, No. 19-CV-03770-WHO, 2021 WL 4979799, at *8 (N.D. Cal. Oct. 27, 2021) (granting motion *in limine* in patent case precluding “arguments or suggestions that [defendant] poses a risk to national security or invasion of personal information by offering sequencing products or diagnostic testing”); *MobileMedia Ideas, LLC v. HTC Corp.*, No. 2:10-CV-112-JRG, 2013 WL 12158524, at *3 (E.D. Tex. Apr. 24, 2013) (granting motion *in limine* in patent case precluding plaintiff from “referring to [defendant] as a ‘Chinese’ company”).

XIV. MOTION *IN LIMINE* NO. 13: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING EVIDENCE OR ARGUMENT REGARDING NON-PARTY STATEMENTS DESCRIBING DR. BATES AS A CHILD PRODIGY OR GENIUS.

Singular should be precluded from introducing evidence, argument, or testimony regarding non-party statements describing Dr. Bates as a child prodigy, genius, or the like, as these statements are hearsay, irrelevant, and unduly prejudicial to Google.

First, non-party, out-of-court statements about Dr. Bates’s precocious childhood are inadmissible hearsay. *See* Fed. R. Evid. 801. Singular’s exhibit list indicates that it will seek to introduce statements by non-parties that describe Dr. Bates as a child prodigy or genius. *See* Phung Decl., Exs. 40 (article calling Dr. Bates a “13-year-old prodigy”); 41 (article describing the then-12-year-old Dr. Bates as a “gifted child” who ended up “teaching advanced programming language [*sic*]” to graduate students); *see also id.* 42 (similar); 43 (similar). Singular will presumably (and impermissibly) offer these documents for the truth of the matter asserted: that others found Dr. Bates to be a gifted child and entered him in a new advancement program at a prestigious university. These articles, and any other non-party statement about Dr. Bates’s childhood intelligence, are hearsay to which no exception applies. *See Horta v. Sullivan*, 4 F.3d 2, 8 (1st Cir. 1993) (newspaper article “inadmissible at trial to establish the truth of the reported facts”).¹⁵

Second, non-party, out-of-court statements regarding Dr. Bates’s childhood intelligence should be excluded on the independent basis that the evidence would be irrelevant and highly prejudicial to Google. *See* Fed. R. Evid. 401. Others’ impressions of Dr. Bates’s childhood intelligence are not probative of whether Google infringed Dr. Bates’s patents, whether it did so willfully, whether those patents are valid, or the damages, if any, to which Singular is entitled. Indeed, the articles describe assessments of Dr. Bates made fifty years ago, decades before either of the patents involved in this case were issued or any allegations of infringement were brought.

¹⁵ Furthermore, any quotes in the articles are themselves inadmissible hearsay-within-hearsay. *See Rodriguez v. Boston Pub. Schs.*, No. 19-10116-LTS, 2022 WL 1715189, at *3 n.7 (D. Mass. Feb. 25, 2022) (newspaper article quoting anonymous staff member was inadmissible hearsay because article was hearsay and quote within article was hearsay-within-hearsay).

The topical and temporal disconnect from any issues relevant to this case alone warrants exclusion. But even if this evidence had any relevance, Singular should still be precluded from introducing it because of the danger of unfair prejudice to Google. *See* Fed. R. Evid. 403. Evidence of non-parties describing Dr. Bates as a child genius or prodigy could have the tendency to turn the jury's attention to others' subjective opinion of Dr. Bates and his background, rather than to the questions it must actually decide, like whether Google's TPUs infringe Singular's patents. This risk substantially outweighs any minimal probative value of the evidence, warranting exclusion.

For those reasons, the Court should exclude testimony, evidence, or argument regarding non-party statements characterizing Dr. Bates as a child genius, prodigy, or the like.

XV. MOTION *IN LIMINE* NO. 14: SINGULAR SHOULD BE PRECLUDED FROM PRESENTING EVIDENCE OR ARGUMENT REGARDING THE DISCOVERY PROCESS AND DISCOVERY DISPUTES IN THIS CASE.

Google moves under Federal Rules of Evidence 402 and 403, to exclude evidence, argument, and testimony regarding the discovery process in this case and the parties' discovery disputes, including the identity of the parties' document custodians, how and when specific documents were produced or collected, and litigation holds.

The Court has resolved several discovery disputes between the parties since this case was filed in 2019. *See e.g.*, Dkt. 116 (Google's Motion to Compel); Dkt. 153 (Google's Motion for a Protective Order); Dkt. 169 (Google's Renewed Motion to Compel); Dkt. 214 (Singular's Motion to Compel); Dkt. 262 (Singular's Motion to Compel). Most recently, Singular filed motions to reopen discovery and to compel additional discovery. *See* Dkt. 548, 560. Both parties have produced documents in the past several months, long after the close of fact discovery. *See* Phung Decl. ¶ 2. Beyond the disputes in which the Court has been involved, the parties have also negotiated search terms, custodians, and other ESI-related issues. There should be no testimony, evidence, or argument about discovery disputes or the discovery process generally, because such information is irrelevant and would confuse the issues, mislead the jury, and waste time. *See* Fed. R. Evid. 401; Fed. R. Evid. 403.

First, the parties’ discovery disputes and the discovery process generally are not relevant to any of the issues in this case. This litigation’s discovery history has no bearing on whether Singular’s patents are invalid, whether Google willfully infringed Singular’s patents, or whether Singular is entitled to damages. *See* Fed. R. Evid. 401 (evidence is relevant if it tends to make a fact of consequence “more or less probable”). Courts have excluded evidence of discovery issues in similar circumstances, recognizing that it is irrelevant to the issues. *See e.g., CardiAQ Valve Techs., Inc. v. Neovasc Inc.*, No. 14-CV-12405-ADB, 2016 WL 8203206, at *1 (D. Mass. Apr. 25, 2016) (granting motion to exclude “any evidence regarding the [parties’] discovery dispute” as “irrelevant”); *Mformation Techs., Inc. v. Research in Motion Ltd.*, No. C 08-04990 JW, 2012 WL 2339762, at *2 (N.D. Cal. June 7, 2012) (“Evidence of the parties’ discovery disputes are not relevant to the questions of patent validity or infringement, and thus should not be presented to the jury.”). Evidence or argument related to the parties’ ESI history, including whether individuals were document custodians and whether and when particular documents were produced during discovery, similarly have no bearing on any issue of consequence. *See e.g., CardiAQ Valve Techs., Inc.*, 2016 WL 8203206, at *1 (noting that “[t]he process through which the [disputed document] came about—during discovery and following motion practice—is irrelevant”).

Second, even if testimony, evidence, or argument about discovery disputes or the discovery process were relevant to the issues in this case, it should still be excluded under Rule 403 because it is confusing, is distracting, and risks prejudicing Google. As courts have recognized, “allowing the parties to describe . . . years of discovery to the jury will detract from the issues.” *Thompson v. Glenmede Tr. Co.*, No. 92-5233, 1996 WL 529693, at *2 (E.D. Pa. Sept. 17, 1996). “Rather than focus on the issues in the case,” these “irrelevant side issues of the discovery process” could lead the jury to be “misled.” *Id.* Understandably, “jurors have very little or no knowledge . . . of the discovery procedures.” *Tutein v. Ford Motor Co.*, No. SX-210-CV-018, 2016 WL 11212415, *2 (V.I. Super. Dec. 23, 2016) (excluding references to discovery disputes). Thus, jurors are unlikely to understand testimony related to a document’s [REDACTED]

[REDACTED] Phung Decl., Ex. 44 at 89:1-3, 92:13-14. Furthermore, these questions (which Google witnesses cannot answer, either) could lead jurors to incorrectly infer that the witnesses without knowledge of the discovery process are hiding something.

The above remains true even if Singular argues that discovery is relevant to its willfulness allegations. Whether Google’s alleged infringement was willful requires a jury to determine only whether Google was aware of Singular’s specific patents, and whether Google deliberately or intentionally infringed those patents. *See Ironburg Inventions Ltd. v. Valve Corp.*, 64 F.4th 1274, 1296 (Fed. Cir. 2023). Google’s procedure for collecting and producing documents has no bearing on these elements. *See Solutran, Inc. v. U.S. Bancorp*, No. 0:13-cv-02637 (SRN/BRT), 2018 WL 1050403, at *2 (D. Minn. Feb. 26, 2018) (granting motion *in limine* to exclude evidence of document retention policy because it was not probative of willful infringement). And even if evidence of the parties’ discovery disputes did bear on those elements, “the weak inference it raises is substantially outweighed by the danger of unfair prejudice,” which “could confuse and mislead the jury, encouraging it to punish Defendants for alleged litigation misconduct rather than for willful infringement.” *Id.* at *3.

For these reasons, this Court should exclude all testimony, evidence, or argument about the parties’ discovery disputes and the discovery process under Rules 401 and 403.

Respectfully submitted,

Dated: December 5, 2023

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LOCAL RULE 7.1(a)(2) CERTIFICATION

I, Nathan R. Speed, counsel for Defendant Google LLC, hereby certify that I conferred with counsel for Plaintiff to resolve the issues presented in this motion, but, after a good faith attempt to reach agreement, the parties were unable to do so.

/s/ Nathan R. Speed

Nathan R. Speed

CERTIFICATE OF SERVICE

I certify that this document is being filed through the Court's electronic filing system, which serves counsel for other parties who are registered participants as identified on the Notice of Electronic Filing (NEF). Any counsel for other parties who are not registered participants are being served by first class mail on the date of electronic filing.

/s/ Nathan R. Speed

Nathan R. Speed